

DIALOG(R)File 347:JAPIO

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02762266 **Image available**

MANUFACTURE OF MOS TRANSISTOR

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INTL CLASS: [4] H01L-029/78; H01L-027/12

JAPIO CLASS: 42.2 (ELECTRONICS -- Solid State Components)

JAPIO KEYWORD:R097 (ELECTRONIC MATERIALS -- Metal Oxide

Semiconductors, MOS) JOURNAL: Section: E, Section No. 775, Vol. 13, No. 268, Pg.
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ABSTRACT

PURPOSE: To improve interface characteristics between a semiconductor layer and an insulating film and controllability of an element, by forming a first and a second insulating films on a first and a second main surfaces of a semiconductor substrate by thermal oxidation.

CONSTITUTION: One side surface of a semiconductor substrate 11 is oxidized by heat in an oxidation atmosphere at a high temperature to form a first gate insulating film 12. Then, a polycrystalline silicon layer serving as a gate electrode is laminated and windowed by photolithography to form a first gate electrode 13A. Then, a base material 15 is provided by thickly growing polycrystalline silicon on an insulating layer 14 which is provided by growing SiO(sub 2) by a CVD method. Then, the base material 15 is fixed and the semiconductor substrate 11 is ground so as to be a thin film. Then, the surface of the semiconductor substrate 11 is oxidized by heat in a high temperature oxidation atmosphere to form a second insulating film 16 and then to form a second gate electrode 17 with polycrystalline silicon and further form a protective film 18 and a contact 19, with the result that a MOS transistor is completed.

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MOS transistor mfr - in which device control is improved by forming 1st and 2nd gate insulation films by thermal oxidn. NoAbstract Dwg 7/9

Patent Assignee: SONY CORP (SONY)

Number of Countries: 001 Number of Patents: 001

Patent Family:

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Priority Applications (No Type Date): JP 87216588 A 19870831

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Title Terms: MOS; TRANSISTOR; MANUFACTURE; DEVICE; CONTROL;
IMPROVE; FORMING; GATE; INSULATE; FILM; THERMAL; OXIDATION;
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